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Abstract. The U. S. Soil Conservation Service assists Iowa farmers to plan and apply soil and water conservation practices on farm land. Farmers themselves decide which practices they will apply. Almost all soil conservation practices affect wildlife. Most of them help by stabilizing land use patterns, increasing the ecotone, and adding or protecting herbaceous and woody cover. Iowa conservation farmers are making an important contribution by establishing and maintaining conservation practices beneficial to a varied and important wildlife population.

SOIL CONSERVATION FARM PLANNING — BACKGROUND HISTORY

The United States Soil Conservation Service assists farmers through local Soil Conservation Districts to plan and apply soil and water conservation practices to their farm lands. A part of this service includes providing each cooperating farmer with a detailed soil and land use capability map of his farm. Information on alternative land uses and the expected results of each is also presented to him. The farmer, however, makes his own decision as to which practices he will use and when he will apply them to his land. By and large most of the conservation practices that the farmer installs are of benefit to wildlife. Many are designed specifically to favor wildlife.

RESULTS

The Soil Conservation Service prepares a report on June 30 of each year which lists the amount of conservation practices applied during the year and the total amount on the land to that date. A partial list of practices reported is shown in Table 1.

DISCUSSION

A conservation practice is of value to a wildlife species only when it supplies a habitat factor lacking in the habitat. An example is the establishment of a food patch for quail in a habitat lacking this element but having an abundance of other essential factors such as nesting and escape cover.

We are all aware that the habitat requirements of wildlife vary according to species. In southern Iowa the presence of absence of a few square feet of brushy cover may determine

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Table 1. Some Soil and Water Conservation Practices Affecting Iowa Wildlife. (Accomplishment report – to June 30, 1960)

Practice names	Unit	Fiscal year 1960 total	Total amount on land, 6-30-60
Stripcropping systems	acres	22,955	408,647
Seeding headlands	acres	2,698	60,541
Farmstead windbreaks	acres	1,486	43,902
Field windbreaks	miles	8	1,082
Tree planting	acres	1,781	10,395
Woodland protection	acres	3,662	75,613
Fish pond treatment	number	1,606	13,589
Hedgerow planting	rods	18,430	413,372
Wetland development	acres	2,809	11,548
Wildlife area treatment	acres	4,864	47,983
Wildlife border improvement	rods	258,958	3,269,018
Critical area planting	acres	584	11,167
Pipe drop inlets	number	444	4,017
Grassed waterways	acres	4,443	95,294
Pond construction	number	1,135	21,750
Stockwater development	number	1,257	23,503
Terracing, Std., Level, and Basin	miles	2,100	39,285
Farmer cooperators	number	4,602	68,534
Farmer cooperators	acres	833,269	12,465,509

the presence or absence of a covey of quail. The lack of suitable herbaceous nesting cover in northern Iowa may be the factor suppressing pheasant numbers. It follows then that the application of a practice such as the planting of shrubs and trees is beneficial only when woody vegetation is an essential part of the habitat and when it does not exist in sufficient quantity.

Most farms have areas which can be developed for a certain kind of wild life or for a variety of wildlife. Such areas include fence rows, field borders, woodland edges, odd corners and areas surrounding farm ponds. Some and occasionally all of these sites are present on a single farm and tend to increase the abundance of diverse forms of desired wildlife when developed to supply the habitat needs of individual species.

Dambach (1948) in Ohio found that field borders consisting of vegetation different from that of adjacent crop fields harbored populations of beneficial insects and small mammals, whereas those field borders containing essentially the same vegetation as adjacent fields supported numerous injurious crop pests. It is evident that the proper development of crop field borders is beneficial to the farming enterprise as well as to a variety of game and non-game animals.

In some parts of Iowa the original plant life has disappeared or nearly so. As a consequence the kinds of animal life have changed. The original prairie grasses supported a large population of buffalo but meager numbers of people. Now the prai-

rie grasses are largely gone as are the buffalo. Agricultural crops, people, pheasants, quail and a host of other animals have replaced them. Intensive management of the land resulted from the change in land use, and the kinds of animals changed as man replaced the original vegetation with that of his choosing. Animal life in kinds and numbers is inextricably tied to the existing plant life.

The game and non-game species we know today are products of today's land use. A quick reversion to the original prairie conditions would cause most of our favorite wildlife species to disappear or be drastically reduced in numbers. Quail were not plentiful in southern Iowa before agriculture was practiced (Errington, 1933). The same is true of prairie chickens. Pheasants, cottontails and fox squirrels are closely tied to our present day agricultural economy.

Today we find raccoons, foxes, rabbits, song birds and many other wild animals maintaining their numbers or gaining in population in heavily farmed areas. In recent years other species have come back strongly—beaver and the white-tailed deer are examples.

Some forms of wildlife could not exist in large numbers under prairie conditions, but they thrived as agriculture entered the picture and then faded again as farming was practiced intensively. The prairie chicken is an example.

The farmer strives to attain a high level of plant management. His reasons are economic and our economy is largely based on his ability to reach this goal. He intends that his corn field should grow only one kind of plant—corn, and he spends time, effort and money to eliminate other types of vegetation in favor of corn. But he is never completely successful. The laws of plant succession are constantly at work to revegetate the bare ground between the corn rows — a first step toward reaching the natural climax vegetation which is either prairie grasses or trees depending upon the location.

Animal life is closely correlated with plant succession. Squirrels and nut trees have been linked since—who knows when? Plants with hard seeded fruits and birds help each other; the fruits furnish food and the birds scatter and plant the seeds. Raspberries, blackberries, mulberries, carrion flower, poison ivy, bittersweet and wild grape are a few of the many plants that have this relationship with birds.

Wildlife is a product of the land. If we wish to maintain high numbers of desirable species we must keep landowners in-

formed of the impact on wildlife that land use changes bring about. The well-informed farmer can and usually will attempt to mitigate damages to wildlife by applying practices which favor desirable species.

In Iowa, wildlife is largely produced on farm land since most of the land in the state is farmed. We anticipate that the management of Iowa farms will become more intensive in the future; that is, row crops may be grown on the same field year after year. On such farms, planning is essential to the continued existence of game and non-game species of wildlife. We cannot leave the production of this resource to chance.

Encouraging farmers to plan and apply complete conservation programs on their lands offers the best opportunity to ensure the continued abundance of wild creatures we now enjoy. In this age of mechanization and intensified land use, planning for wildlife is a necessity.

References

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